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ABSTRACT

This is an annotated bibliography intended to provide, for teachers of English, enough information about research and experimentation in sentence-combining to enable them to begin to use it as a pedagogical technique with some understanding of the theories and issues involved. The annotations are selective in that they summarize the information judged most useable by the classroom teacher, though some information about research designs is also summarized. Those who work out uses of the technique for their own classes should eventually examine all these sources for themselves, but in the meanwhile, this bibliography, it is hoped, can get them started on their own applications of the technique. (Author)

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A BIBLIOGRAPHICAL INTRODUCTION TO SENTENCE-COMBINING

Ruth Crymes

This is an annotated bibliography intended to provide , for teachers of English, enough information about research and experimentation in sentence-combining to enable them to begin to use it as a pedagogical technique with some understanding of the theories and issues involved.

The annotations are selective in that they summarize the information judged most useable by the classroom teacher, though some information about research designs is also summarized.

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CONTENTS

Research into language development in native speakers

Page #

1 Hunt, Kellog W. GRAMMATICAL STRUCTURES WRITTEN AT THREE GRADE LEVELS. NCTE Research Report #3. Champaign, Ill.: National Council of Teachers of English, 1965. Pp. xix + 159.

13 _____. "How Little Sentences Grow into Big Ones." In NEW DIRECTIONS IN ELEMENTARY ENGLISH, ed. by Alexander Frazier. Champaign, Ill: National Council of Teachers of English, 1967, 110-124. (Also in Mark Lester (ed.), READINGS IN APPLIED TRANSFORMATIONAL GRAMMAR, 2nd ed. New York: Holt, Rinehart and Winston, 1973).

13 _____. "Recent Measures in Syntactic Development," Elementary English, Vol. 43 (November 1966), 173-739. (Also in Lester--see preceding entry).

11 _____. SYNTACTIC MATURITY IN SCHOOLCHILDREN AND ADULTS. Monograph of the Society for Research in Child Development. Serial No. 134, No. 1, February 1970, Pp. 67.

O'Donnell, Roy C., William J. Griffin, and Raymond C. Norris. SYNTAX OF KINDERGARTEN AND ELEMENTARY SCHOOL CHILDREN: A TRANSFORMATIONAL ANALYSIS. NCTE Research Report #8. Champaign, Ill.: National Council of Teachers of English, 1967. Pp. xv = 115.

Research into accelerating language development in native speakers

4 Mellon, John. TRANSFORMATIONAL SENTENCE COMBINING: A METHOD FOR ENHANCING THE DEVELOPMENT OF SYNTACTIC FLUENCY IN ENGLISH COMPOSITION. NCTE Research Report #10. Champaign, Ill.: National Council of Teachers of English, 1969. Pp. x + 114.

7 O'Hare Frank. SENTENCE-COMBINING: IMPROVING STUDENT WRITING WITHOUT FORMAL GRAMMAR. NCTE Research Report #15. Champaign, Ill.: National Council of Teachers of English, 1973. Pp. xi + 108.

Research into developing English language competence of non-native speakers through sentence combining exercises

15 Crymes, Ruth. "The Relation of Study about Language to Language Performance: With Special Reference to Nominalization," TESOL Quarterly, Vol. 5, No. 3 (September 1971), 217-230.

Criticisms of the Hunt and Mellon studies

9 Christensen, Francis. "The Problem of Defining a Mature Style," English Journal, Vol. 57, No. 4 (April 1968), 572-579.

13 Moffet, James. TEACHING THE UNIVERSE OF DISCOURSE. Boston: Houghton Mifflin Co., 1968. Pp. 170-171.

Ideas for developing work in sentence-combining

Page #

15 Cooper, Charles R. "An Outline for Writing Sentence-Combining Problems," English Journal, January 1973, 96-102+.

13 Moffet, James. DRAMA: WHAT IS HAPPENING. The Use of Dramatic Activities in the Teaching of English. Champaign, Ill.: National Council of Teachers of English, 1967. See chapter on Dialogue, pp. 11-20.

16 Stevick, Earl. Q WORKBOOK IN LANGUAGE TEACHING: With Special Reference to English as a Foreign Language. New York: Abingdon Press, 1966, pp. 60-66.

Textbooks written for native speakers

14 COMPREHENSIVE READING SERIES WORKBOOKS. The SRA Reading Program. 6 Workbooks (Levels G, H, I, J, K, and L).

13 Strong, William. SENTENCE COMBINING: A Composing Book. New York: Random House, 1973. (With Instructor's Manual)

Textbooks written for non-native speakers

15 Crymes Ruth, Gary James, Larry Smith and Harvey Taylor. DEVELOPING FLUENCY IN ENGLISH. Englewood Cliffs, N. J.: Prentice-Hall, 1974.

16 Eskey, David E. and Richard B. Noss. ENGLISH NOMINALIZATIONS: WRITING DRILLS. Thai Watana Panich Co. Ltd. (Longman Group Ltd.). 599 Mitrichit Road, Bangkok: 1972.

15 Imamura, Shigeo and James Ney. Book I READINGS FROM SAMUEL CLEMENS. Book 2. READINGS IN AMERICAN SOCIETY. Book 3. READINGS IN THE PHILOSOPHY OF SCIENCE. The audio Lingual Literary Series. Blaisdell Publishing Company, 1969.

16 Rand, Earl. CONSTRUCTING SENTENCES. New York: Holt, Rinehart and Winston, Inc., 1969.

Kellogg W. Hunt. GRAMMATICAL STRUCTURES WRITTEN AT THREE GRADE LEVELS. NCTE Research Report #3. Champaign, Illinois: National Council of Teachers of English, 1965. Pp. xix + 159.

Hunt's study is a seminal piece of research which identifies a language unit called the T-unit, an abbreviation for "minimal-terminable unit," and uses it in delineating various indexes of syntactic maturity. A T-unit, as defined by Hunt, is a sentence with only one main clause plus any subordinate clauses or non-clausal elements accompanying it. In effect, the T-units in a sequence of written or transcribed utterances can be marked off by maximum placement of periods.

In examining written samples of 1000 words each from 54 students, 18 each from grades 4, 8, and 12, with average IQ scores, Hunt found that at each higher grade level the students wrote longer T-units. He also examined the writing of superior adults (defined as those who had published in the Atlantic Monthly and Harper's) and found that their T-units were longer than those of the 12th graders. His research led him to the conclusion that T-unit length is the best single index of syntactic maturity, which he defined operationally as "the observed characteristics of writers in an older grade"(p. 5). For Hunt, the term "syntactic maturity" carries no connotation of "good" or "effective" writing. In Hunt's study the average number of words per T-unit for each level was as follows: Grade 4--8.6; Grade 8--11.5; Grade 12--14.4; Superior adults--20.3.

Hunt analyzed the structure of the T-units in the writing samples from the point of view of generative-transformational grammar to see what internal differences there were in the T-units produced at the three grade levels. The findings which are of chief significance to the development of the pedagogical technique known as sentence-combining are: (1) Fourth graders produce the same kinds of grammatical structures as the older students but they don't produce all

kinds in the same amount as older students do; (2) The T-units of 12th graders contain almost four times as many adjective clauses and about twice as many noun clauses as those of 4th graders; and (3) The older students write substantially more non-clausal modifiers (adj., prep. phrases, infinitives, and participles) and more "near clause"nominals (gerund and infinitival nominals) than the younger children; that is, they consolidate more information into shorter space through sentence embedding--primarily through adjective and nominal transforms. The fact that their T-units grow longer even thougn they increasingly de-form, and hence shorten, the embedded sentences, indicates that not only do they embed more sentences (rather than retaining them as main clauses) but also they expand their ideas more, including more information.

Hunt made no pedagogical claims for his findings. He pointed out that his research suggests a kind of sentence-building program to give the student practice in exploring and using the resources available to him in his language. He made it clear that such a program would not necessarily include explicit instruction in transformational grammar. He left the question open as to the possibility--and the wisdom--of an instructional program which would accelerate the development of syntactic maturity of native speakers of English.

Such sentence-building--or sentencing combining programs--have been developed and tested by John Mellon and Frank O'Hare. Further research of developmental trends along Hunt's model has been done by O'Donnell et al. with children in grades K, 1, 3, 5, 7, examining both oral and written English.

Roy C. O'Donnell, William J. Griffin, and Raymond C. Norris. SYNTAX OF KINDERGARTEN AND ELEMENTARY SCHOOL CHILDREN: A TRANSFORMATIONAL ANALYSIS. NCTE Research Report #8. Champaign, Illinois: National Council of Teachers of English, 1967. Pp.xv + 115.

Using Hunt's T-unit as the basic unit for analysis, O'Donnell et al. studied language development as it progressed through six levels--K, 1, 3, 5, and 7. The study thus dovetails with that of Hunt, who analyzed written language samples

from grades 4, 8, and 12. Using 180 children, 30 from each level, O'Donnell et al. analyzed oral language data from all levels and written language data from grades 3, 5, and 7. There were the same number of boys and girls at each level. The language samples collected were responses to moving-picture cartoon versions of Aesop's fables.

The findings of the study provide confirmation of the general trend of normal growth described by Hunt: T-unit length increased at every level in both language modes. However, this study found significant increases in the use of all three major constructions produced by transforms--adjectivals, nominals, and adverbials--whereas Hunt's study found significant increases only in the first two. O'Donnell et al. label as "enigmatic" the fact the the kindergarteners produced more relative (adjective) clauses in speech than did the children at the other levels.

The researchers noted that the greatest overall increases and the most frequently significant increments from level to level were in adverbial infinitives, sentence adverbials, coordinations within T-units, and modifications of nouns by adjectives, participles, and prepositional phrases--all of which involve deletion transformations. They are cautious about drawing conclusions about the sequence in children's acquisition of syntactic structures since among the 39 specific structures and functions that they studied the three missing from the kindergartener's language--noun modification by an adverb and transformation-produced constructions used as indirect objects and object complements--were not much used by the older children either. There was some indication that the difference between the structures most used at kindergarten level and those most used at later levels was the increased use at later levels of structures resulting from deletion transformations.

They found that the most significant increases in syntactic maturity in speech occurred at grades 1 and 7, and in writing at grade 5, and that at grades 5 and 7 syntax developed faster in writing than in speech. In speech, the development of boys and girls was the same; in writing the development of the girls was higher in grades 3 and 5 but in grade 7 the boys were higher.

John Mellon. (1) TRANSFORMATIONAL SENTENCE COMBINING: A METHOD FOR ENHANCING THE DEVELOPMENT OF SYNTACTIC FLUENCY IN ENGLISH COMPOSITION. Final Report. Cooperative research Project No. 5-8418. Office of English Education and Laboratory for Research in Instruction. Graduate School of Education, Harvard University, Cambridge, Massachusetts, 1967. Pp. viii+140(2) (Same title as above) NCTE Research Report #10. Champaign, Illinois: National Council of Teachers of English, 1969. Pp. x + 114.

John Mellon's study was directly inspired by Hunt's research. Mellon aimed to find out whether or not an instructional program in sentence-building--specifically sentence-combining requiring the manipulation of adjective and nominal transforms, since Hunt had identified these as the areas of greatest development through time--would accelerate the development of syntactic fluency. By syntactic fluency Mellon meant essentially the same as Hunt did by syntactic maturity. In Mellon's study syntactic fluency is measured chiefly by increase in T-unit length and increase in frequency of adjective and nominal transforms per T-unit. Accelerated development is determined by comparison with the normal rate of growth described by Hunt. Mellon found that his experimental subjects did indeed experience accelerated development. He emphasized that the increase in syntactic fluency was characterized by <u>expansion</u>, through addition of more ideas, as well as by <u>consolidation</u>. He pointed out that the two go hand in hand.

Mellon worked with 247 seventh grade children of five ability levels (highest to lowest) for one academic year. The control group received traditional parsing

exercises. A placebo group received no grammar; instead they had extra instruction in literature and composition. The experimental group received a course in language in which they studied a pre-Aspects model of transformational grammar, a model deliberately selected by Mellon because it is less abstract than later models, and, in connection with that study, in fact as an integral part of it, did a series of sentence-combining exercises which required them to embed sentences in specified ways, cued each time by a direction in the form of a transformational label. For example, the label T:der-NP means to derive a noun from some word in the sentence and make other necessary changes following from that change, and insert the resulting nominal into a specified position in a higher sentence, thus:

SOMETHING will very likely hinder SOMETHING.
Those trawlers are closely concentrated. (T:der-NP)
We speedily recover the astronauts (T:der-NP)

Rewrite: The close concentration of those trawlers will very likely hinder our speedy recovery of the astronauts.

The absence of a transformational label and the presence of repeated words signal that an adjective transform is to be used to embed the lower sentence(s). For example:

The office building towered above the tenement.
The building was gleaming.
The building was new.
The building etc.

Rewrite: The gleaming new office building...towered above the tenement.

A majority of the exercises (183 out of 281) were multiple embedding problems.

Mellon argued that these sentence-combining exercises were a-rhetorical; that is, students were not required to decide what to say and who to say it to. They only had to concern themselves with how to manipulate the syntax of pre-packaged sentences according to directions given them. The purpose was to practice using some of the resources of the English language that the students already used in their own language productions but which they did not yet

exploit in a mature way (in Hunt's sense of maturity). Doing the exercises was not a way of practicing composition. Mellon made the point very strongly that the exercises were not a linguistic approach to writing. In the Epilogue to the 1969 publication of his study he reiterates that his sentence-combining exercises were a-rhetorical, that they were a means of enriching the students' linguistic environment, and that they enhanced language development, not rhetorical skill. All students were also enrolled in a composition class but there was no connection between the composition class and the experimental language class.

Mellon's method of testing was to administer a set of 9 pre and 9 post compositions to each student and select the first 10 T-units from each composition for analysis. He analyzed the T-units in terms of 12 factors of syntactic fluency, which included T-unit length, nominal clauses per 100 T-units, nominal phrases per 100 T-units, relative clauses per 100 T-units, relative phrases per 100 T-units, relative words per 100 T-units, plus some other measures (subordination-coordination ratio, embedded kernel sentences per 100 T-units, etc.) He changed Hunt's T-unit in one way: He counted adverbial clauses introduced by logical conjunctions as T-units.

The question arises as to what the overall quality of the writing was. Mellon gave a small sampling of compositions from the two highest ability levels in all three groups to some junior high school teachers and asked them to rate them on ideas, organization, style, setence structure, and vocabulary. The writing of the experimental group was judged to be inferior to that of the control group and equal to that of the placebo group. Mellon felt that certain problems resulting from the sampling tecnhique made these findings ambiguous.

Mellon's study contains a very informative survey of research into the relation between grammar study and writing ability. His appendix includes the pre and post composition assignments which he administered as tests, an outline

of the grammar course that was taught to the experimental group, and examples of sentence-combining exercises.

Frank O'Hare. SENTENCE COMBINING: IMPROVING STUDENT WRITING WITHOUT FORMAL GRAMMAR. NCTE Report #15. Champaign, Illinois: National Council of Teachers of English, 1973. Pp. xi + 108.

Whereas Mellon's claim was that the sentence-combining exercises in his experiment were a part of a study of language course and were a-rhetorical in nature--even though he came to agree that they enriched his students' language environment and that this enrichment rather than the study about language was the probably cause of his students' accelerated growth in syntactic fluency (see Epilogue in Mellon 1969)--O'Hare, as his title indicates, makes a claim for the rhetorical value of sentence-combining exercises. He argues that Mellon's definition of "a-rhetorical" is too narrow and suggests that the exercises do in fact teach writing in the sense that they instruct the student in syntactic options, which are one determinant of style. However, like Mellon, O'Hare postulated that students would use any increased skill in syntactic manipulation that they developed through the exercises in their own way and in their own time. They would not be apt to write sentences on their own as long as those in the sentence-combining exercises on which they had practiced. Rather, there would be, in O'Hare's terms, a "rub-off" effect on their writing from the manipulative exercises.

O'Hare's subjects, like Mellon's, were seventh graders. The experimental treatment differed from the control treatment only in the presence of the sentence-combining exercises. There was no formal instruction in grammar in either treatment. Like Mellon, O'Hare analyzed T-units from pre and post compositions which required various modes of discourse--narration, description, and exposition--looking for indexes of syntactic maturity and measuring them. The six indexes he used were words per T-unit, clauses per T-unit, words per clause, and noun, adjective, and adverb clauses per 100 T-units. By all measures the

Increase in syntactic fluency of the experimental group was greater than that of the control group, substantiating O'Hare's hypothesis that it was the manipulation of sentences in the sentence-combining exercises and not the study of grammar that led to the improvement in syntactic fluency. In Mellon's study the experimental group had both studied grammar (transformational) and done sentence-combining exercises, and though Mellon believed that it was the latter that had the salutory effect on their development of syntactic fluency there was no way to determine whether or not the grammar study itself had had any influence.

O'Hare received permission from Mellon to use and change Mellon's sentence combining exercises, and his study used at least 95% of Mellon's setences. The capitalized word SOMETHING was retained in the sentences to indicate an open nominal position. But because students had difficulty interpreting a repeated nour as a signal for an adjective clause, O'Hare used underlining to signal which words would be retained as adjectivals in the final sentence; students knew that everything not underlined in a particular sentence was to be deleted. Another significant change O'Hare made was to alter the labels which served as signals for the transformations to be employed. Actual words rather than grammatical labels were clues to the transformations. Following is a sample exercise:

The children clearly must have wondered SOMETHING.
The bombings had orphaned the children. (WHOM)
SOMETHING was humanly possible somehow. (WHY).
Their conquerors pretended SOMETHING. (IT-FOR-TO)
Chewing gum and smiles might compensate for the losses. (THAT)
The losses were heartbreaking.
They had so recently sustained the losses.

The lower sentences are not indented as in Mellon. The students were instructed to move down the list of sentences, combining them, as they went, into one

sentence. The expected rewrite of the above exercise was:

> The children whom the bombing had orphaned clearly must have wondered how it was humanly possible for their conquerors to pretend that chewing gum and smiles might compensate for the heartbreaking losses which they had so recently maintained.

O'Hare's experiment was conducted with all 83 of the seventh graders at the Florida State University High School for one academic year. He assigned them randomly to the experimental and control groups. In addition to the six measures of syntactic fluency mentioned above, he also got a single qualitative judgment from eight experienced English teachers based on the factors of ideas, organization, style, vocabulary, and sentence structure. For this evaluation a sub-sample of post compositions was used. The compositions of the experimental group were judged to be significantly better than those of the control group.

O'Hare suggests that the sentence-combining exercises developed in the students the cognitive "chunking" ability that leads to more mature sentences. He also makes the interesting suggestion that sentence-combining exercises build a student's confidence in his ability to handle syntax and this confidence perhaps leads him to push on to deal with increasingly difficult problems of expression.

In appendices O'Hare provides examples of sentence-combining problems and lists the composition assignments used in the pre and post testing.

Francis Christensen. "The Problem of Defining a Mature Style," English Journal, Vol. 57, No. 4 (April 1968), 572-579.

Christensen takes issue with Hunt's concept of "syntactic maturity." He feels that Hunt's measures of syntactic maturity do not identify good style. Christensen selected some of the writings that Hunt had used (from the Atlantic

Monthly and Harper's) and also some other professional writings and analyzed them. He found that of the six writers whose writing he analyzed, the writers that he considered best (by his own judgment) used more embeddings that resulted in "free," in contrast to "bound" modifiers, than the other writers did. Free modifiers are those which are additive, or non-essential. A rule of thumb for identifying free modifiers is to look for those constructions set off by commas. Such free modifiers are particularly good devices, according to Christensen, for avoiding long noun phrases, the "hallmark of jargon," in his words. He says, for example, that Northrop Frye might have written this sentence:

> The curriculum is at best, however, a design to be interpreted by teacher with varying degrees of ability and insight for children with different equipment in intelligence and language background.

But, instead, he wrote this:

> The curriculum is at best, however, a design to be interpreted by teachers, for students--by teachers with varying degree of ability and insight, for children with differing equipment in intelligence and language background.

Christensen presents the following two definitions of a mature style as hypotheses to be tested: (1) A mature style will have a relatively high frequency of free modifiers, especially in the final position. The frequency of free noun, verb, and adjective phrases and of verbid clauses will be high. (2) Such a style will have also a relatively high frequency of structures of coordination within the T-unit--what might be called intra-T-unit coordination. Inter-T-unit coordination, producing compound sentences, should be regarded as a feature of paragraph rather than sentence structure.

Though Christensen seems to have misunderstood Hunt's label "syntactic maturity" (Hunt's definition was an operational one, defining it as the syntax of older students and making no rhetorical claims for it), still Christensen's comments on the rhetorical effectiveness of free modifiers should

be taken into account in preparing sentence-combining exercises.

See Mellon's Epilogue (NCTE 1969) for Mellon's response to Christensen's criticism of the Hunt and Mellon studies.

Kellogg Hunt. SYNTACTIC MATURITY IN SCHOOLCHILDREN AND ADULTS. Monographs of the Society for Research in Child Development. Serial No. 134, No. 1, February 1970. Pp. 67.

Hunt wanted to find out if the development of syntactic maturity that he had characterized in his 1965 study would be the same if all subjects wrote passages containing the same information. In the 1965 study he collected his data from compositions written on topics that the teachers had happened to assign. In this study he gave all the experimental subjects a passage consisting of 32 sentences of connected discourse and asked them to write the passage in a better way but not to leave out any information. The passage was developed by Roy O'Donnell. This is the passage:

Aluminum

Directions: Read the passage all the way through. You will notice that the sentences are short and choppy. Study the passage, and then rewrite it in a better way. You may combine sentences, change the order of words, and omit words that are repeated too many times. But try not to leave out any of the information.

Aluminum is a metal. It is abundant. It has many uses. It comes from bauxite. Bauxite is an ore. Bauxite looks like clay. Bauxite contains aluminum. It contains several other substances. Workmen extract these other substances from the bauxite. They grind the bauxite. They put it in tanks. Pressure is in the tanks. The other substances form a mass. They remove the mass. They use filters. A liquid remains. They put it through several other processes. It finally yields a chemical. The chemical is powdery. It is white. The chemical is alumina. It is a mixture. It contains aluminum. It contains oxygen. Workmen separate the aluminum from the oxygen. They use electricity. They finally produce a metal. The metal is light. It has a luster. The luster is bright. The luster is silvery. The metal comes in many forms.

Passages written by 50 students from each of the following grades--4, 6, 8, 10, and 12--with each group of 50 representing the normal range of academic ability were analyzed. Two groups of adults--one skilled and the other judged

to be average--also rewrote the passage.

Analysis showed the same developmental trends as in the 1965 study. The older writers wrote more words per T-unit, and showed increased maturity on the other measures as well, even though no new information was added, indicating that maturity has a syntactic parameter that shows itself in consolidation and does not just result from the older person having more ideas and more to say. The skilled adults achieved more consolidation of the information than the 12th graders, though the average adults did not.

The older the group, the fewer the number of input sentences retained as main clauses. The number that were reduced to subordinate clauses increased up to grade 8, levelled off at grade 10, and then declined at grade 12. There was an increase in non-clausal structures from level to level. Of these some were reduced to full predicates and coordinated with other predicates. Beginning with grade 6 the number of these remained relatively constant from level to level. The remaining sentences were reduced to less than full predicates, and the number of these increased signifcantly from level to level.

In the beginning of this monograph, Hunt reviews Hunt (1965) and O'Donnell, Griffin, and Norris (1967).

In this 1970 study Hunt points out that the test instrument lent itself particularly to adjectivalization and says that in general the use of noun clauses is more dependent on subject matter than the use of adjective clauses. This may be true, since his earlier study, which analyzed free writing(in contrast with the controlled content of the aluminum passage), led him to the same conclusion. However, it should be pointed out that to write a controlled passage conducive to nominalization transforms would require the use of "dummy"elements like SOMETHING. It is considerably more difficult to come up with a sequence of natural sounding sequences when dummy elements are used than when they aren't.

The six publications summarized above provide the major background studies for sentence-combining as a pedagogical technique. Following are some additional background references and a listing of some published textbooks which contain work in sentence-combining.

Two articles that Hunt has written summarizing some of this findings are:

Kellogg Hunt. "How Little Sentences Grow into Big Ones," In NEW DIRECTIONS IN ELEMENTARY ENGLISH, ed. by Alexander Frazier. Champaign, Illinois: National Council of Teachers of English, 1967, pp. 110-124.

Kellogg Hunt. "Recent Measures in Syntactic Development," Elementary English , Vol. 43 (November), 1966, 732-739.

Both of these are reprinted in Mark Lester (ed.), READINGS IN APPLIED TRANSFORMATIONAL GRAMMAR, 2nd ed. New York: Holt, Rinehart and Winston, Inc. 1973.

James Moffett has criticized Mellon's sentence-combining program for its a-rhetorical emphasis. Moffett believes that work in sentence-combining has value but that it should be associated with communicative experiences. For his criticisms see:

James Moffett. TEACHING THE UNIVERSE OF DISCOURSE. Boston: Houghton Mifflin Company, 1968, Pp. 170-171.

For some suggestions for combining work in sentence consolidation with communication activities see:

James Moffett. DRAMA: WHAT IS HAPPENING. The use of Dramatic Activities in the Teaching of English. Champaign, Illinois: National Council of Teachers of English, 1967. See the chapter on Dialogue, pp. 11-20.

One textbook for native speakers which draws on sentence-combining research is:

William Strong. SENTENCE COMBINING: A Composing Book. New York: Random House, 1973. (Instructor's manual also available)

Phase One of this text presents lists of connected sentences which students are asked to combine, using transformations of their own choice. Phase Two,

a shorter section, also presents lists of connected sentences for combining, but presents models to follow in doing so: These models incorporate Francis Christensen's ideas on the rhetoric of paragraphs (see Francis Christensen, NOTES TOWARD A NEW RHETORIC, New York, Harper and Row, 1967). A number of the sentences in the exercises in this book are not natural sentences. Native speakers would probably have no difficulty combining them. But non-native speakers would not be working with the same language competence as native speakers and might have difficulty.

The Instructor's Manual summarizes the work of Hunt, Mellon, and O'Hare and also discusses Christensen's and Moffett's criticisms. It is not stated what level students the book is intended for, but the content of the passages indicates that it could be used with secondary students and above.

A set of workbooks for native English speaking primary children which has some exercises in recognizing which set of input sentences go with a single output sentence is:

> COMPREHENSIVE READING SERIES WORKBOOKS. The SRA Reading Program. 6 Workbooks (Levels G,H,I,J,K, and L)

The purpose of these exercises is to help children improve their reading comprehension through giving them practice in recognizing that a single sentence may be a paraphrase of a set of shorter sentences. An example from Level K (p. 29) is as follows:

> Read each numbered group of sentences. Then choose from the sentences below it the one sentence that means the same thing as the group. Put an X on the line in front of your choice. For example:
>
> My brother has a friend. The friend's name is Stanley. Stanley can stand on one leg for six minutes.
>
> __X__ My brother's friend Stanley can stand on one leg for six minutes.
> ____ My brother Stanley's friend can stand on one leg for six minutes.
> ____ My brother's friend for six minutes, Stanley, can stand on one leg.

These exercises do not draw on the sentence-combining research of Hunt and Mellon, but they draw on the concepts of transformational grammar, just as the sentence-comining research does. Though intended for native speakers, these exercises can be adapted for non-native speakers.

An ESL textbook series which includes some work in sentence-combining is:

> Shigeo Imamura and James Ney. Book 1. READINGS FROM SAMUEL CLEMENS. Book 2. READINGS IN AMERICAN SOCIETY. Book 3. READINGS IN THE PHILOSOPHY OF SCIENCE. The Audio Lingual Literary Series. Blaisdell Publishing Company, 1969. (See TESOL Quarterly, Vol. 4, No. 1 (March 1970) p. 101 for a brief description of these texts.

Another ESL textbook which has sentence-combining exercises designed to develop the competence of high intermediate students in the area of nominalization is:

> Ruth Crymes, Gary James, Larry Smith and Harvey Taylor. DEVELOPING FLUENCY IN ENGLISH. Prentice-Hall, 1974.

An article reporting on the experimental use of the materials in this text book is.

> Ruth Crymes, "The Relation of Study about Language to Language Performance: With Special Reference to Nominalization," TESOL Quarterly, Vol. 5, No. 3 (September 1971), 217-230.

This article reports a small experiment in which foreign students who did sentence-combining exercises in nominalization wrote compositions which moved further in the direction of native speaker performance (in the area of nominalization) than did the foreign students in the control group who did not do the exercises.

An outline of various types of conjoinings and embeddings which could be used as a checklist can be found in the following article:

> Charles R. Cooper, "An Outline for Writing Sentence-Combining Problems," ENGLISH JOURNAL, January 1973, 96-102+.

Two ESL textbooks which would be a source of information for a materials writer developing sentence-combining exercises are:

> Earl Rand. CONSTRUCTING SENTENCES. New York: Holt, Rinehart and Winston, Inc., 1969. The purpose of this book is to lead the student through a series of manipulative exercises illustrating ways of conjoining and embedding sentences. Students are asked to combine two sentences to produce one. Rand's textbook does not draw on Hunt's research; however, it draws on the concepts of transformational grammar.
>
> David E. Eskey and Richard B. Noss. ENGLISH NOMINALIZATIONS: WRITING DRILLS. Thai Watana Panich Co. Ltd. (Longman Group Ltd), 599 Mitrichit Road, Bangkok: 1972. This book deals only with the use of nominal transforms to embed sentences. It does not draw on Hunt's research. The source of linguistic information is Robert B. Lees' THE GRAMMAR OF ENGLISH NOMINALIZATIONS (Bloomington, Indiana, 1960). It provides manipulative exercises both in combining two sentences into one and in breaking one sentence down into its two constituent sentences. It is intended to give the student practice in writing those sentences which are more typical of the written than the spoken language.

A check-list of transforms which draws on Hunt's research can be found in the following article:

> Charles R. Cooper. "An Outline for Writing Sentence-Combining Problems," English Journal, January 1973, 96-102+.

Examples of how original texts can be adapated for reading by breaking them down into a set of constituent sentences for reading can be found in:

> Earl Stevick. A WORKBOOK IN LANGUAGE TEACHING: With Special Reference to English as a Foreign Language. New York: Abingdon Press, 1966, pp. 60-66.

Stevick takes a single complex sentence and rewrites it in three different versions, at different levels of difficulty, by simplifying, in three different degrees, the sentence forms which convey the ideas. The simplification is done in an informal, common-sense way; that is, the complex sentence is "unpacked" in such a way that the resulting sentences are surface sentences and not abstract underlying strings.